Ground-level Ozone and Smog Name here: Jason West

1. **Read** what smog is.

Smog is created by air pollutants mixed with the sun and can have bad effects on humans and animals.

1. Click on the link Ozone: Good up High, Bad Nearby
   1. **How** is ozone both good and bad?

There are two parts to the ozone, the part closest to the earth’s surface is bad because it is made by pollutants and may harm humans and animals. The second part protects us from the sun.

* 1. Scroll down to Bad Ozone. **What** causes bad ozone?

The bad ozone is not the stuff put into the air it is a mixture of the stuff put into the air and sunlight.

* 1. **What** time of year is worst for ground-level ozone?

During the summer months.

* 1. **How** can we reduce ground-level ozone?

The EPA is trying to stop different chemicals from being put into the sky.

1. Use the Back Arrow on your tool bar to go back to the main page.
2. Scroll down and click on the link: How Ozone is Formed. Click on Make Ozone. **Summarize** the process of smog formation.

VOC’s and NO₂ react in the sun to create the ozone.

1. Use the Back Arrow on Tool bar to go back to the main page. (It may have opened in a new tab)
2. Go into the link: Thermal Inversion and Smog. **Explain** Thermal Inversions.

This means that when you ascend into the sky every 1000ft the temperature will drop 3.6 degrees.

1. **Summarize** photochemical smog information here.

This is what happens because the light stronger different times of the day and will change the color of the smog because it changes the reactions.

1. Use the Back Arrow to go back to the main page.
2. Go into the link: Lung Attack. Click on all of the links to see breathing normal and with all of the pollution factors. **Contrast** normal breathing with breathing with Ozone, Big particles, Small particles, and carbon monoxide. You may do this in table format.

|  |  |  |  |
| --- | --- | --- | --- |
| Normal | Big Particles | Small Particles | Carbon Monoxide |
| Oxygen cleanly gets into the body and gets to the hemoglobin and is taken to the rest of the body. | Gets into the body but cannot make it all the way through the lungs and cause there to be a blockage in the lung. | Get further into the body but is more dangerous because the particles get into the blood and can be very hazardous. | This is bad because the body treats it exactly like oxygen but the body cannot use it like oxygen |

1. Go back to the main page.
2. Go into the link: Smog, Who does it Hurt? **Read** the article and **answer** “How can I avoid unhealthy exposure to ozone?”

You can avoid unhealthy smog by avoiding areas where there is a lot of smog and also you can do things to stop air pollution.

1. Go back to the main page.
2. Go into the link: Smog City and get the ESA 21: Environmental Science Activities packet. You will be working on the simulation from here on.